

REMARKS

Claims 12 to 24 are now pending and being considered in the present application.

It is respectfully submitted that all of the presently pending claims are allowable, and reconsideration of the present application is respectfully requested.

Applicants thank the Examiner for considering the Information Disclosure Statement, PTO-1449 paper, and cited references, filed May 24, 2007.

Claim 24 was objected to because of an alleged informality. Claim 24 has been rewritten herein without prejudice to obviate the present objection. Withdrawal of the objection of claim 24 is therefore respectfully requested.

Claim 24 was rejected under 35 U.S.C. § 112, ¶ 2, as indefinite.

If upon review of a claim in its entirety, the examiner concludes that a rejection under 35 U.S.C. 112, ¶ 2 is appropriate, an analysis as to why the phrase(s) used in the claim are "vague and indefinite" should be included in the Office action. *M.P.E.P.* § 2173.02. The Examiner has not included any such analysis. Instead, the Examiner asserts that it is unclear to the Examiner how the features of claim 24 operate, which is completely unrelated to whether the phrases or terms of the claim are vague and indefinite. In this regard, it is further noted that the claims recite the invention. Their purpose is not to explain how the invention works. That role is left to the specification. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1558 (Fed. Cir. 1983). Since claim 24 is clear and gives rise to no ambiguity, it therefore satisfies the requirements of 112, ¶ 2.

Notwithstanding the above, the specification clearly describes how to practice the subject matter of claim 24, e.g., at page 3, lines 18 to 29; page 9, line 32 to page 10, line 15; and page 11, lines 10 to 19. The specification describes the possibility of using data of the image sensor system as a reference for determining the calibration data of the radar sensor. Similarly, calibration data of the radar sensor can be used as a reference for determining the calibration data for the image sensor system. In particular, it is explained that data of both sensors may be used for determining errors in either or both of the sensors. Accordingly, the specification explains how data regarding the detection of one sensor may be determined from a detection of another sensor. Therefore, one skilled in the art would understand how to make and use the features of claim 24 without undue experimentation.

In view of all of the foregoing, withdrawal of this indefiniteness rejection is respectfully requested.

Claims 12 to 21 and 24 were rejected under 35 U.S.C. § 102(b) as anticipated by German Patent Application Publication No. 199 62 997, which corresponds to U.S. Patent Application Publication No. 2002/0072869 (the “Stiller” reference). It is respectfully submitted that the “Stiller” reference does not anticipate any of claims 12 to 21 and 24 for at least the following reasons.

To reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (*See Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). As explained herein, it is respectfully submitted that the Office Action does not meet this standard, for example, as to all of the features of the claims. Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely the claimed subject matter of the claims, as discussed herein. (*See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)).

As further regards the anticipation rejections, to the extent that the Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Examiner must provide a “basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art.” (*See* M.P.E.P. § 2112; emphasis in original; and *see Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int’f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

Claim 12 relates to a method for calibrating sensors in a motor vehicle. Claim 12 provides that a calibration of at least two sensors includes using each of the at least two sensors to detect at least one part of a common calibration object. Regarding this feature, the Office Action asserts that “the object is detected using each sensor, and calibration data for the sensors is determined from data regarding the calibration object (paragraphs 0021-0022).” Office Action, page 3. The cited section of the “Stiller” reference refers to data obtained with sensors 2 through 5 regarding a vehicle environment that includes “objects 6 or even groups of objects 6.” The “Stiller” reference, paragraph 21. The cited section does not identically disclose, or even suggest, that two or more sensors detect a common calibration object, as

provided for in the context of claim 12. Similarly, the “Stiller” reference provides for sending to a calibration unit “data recognized as stationary or quasi-stationary objects.” The “Stiller” reference, paragraph 5. There is no indication that any single object is detected by both sensors. The only indication provided by the “Stiller” reference regarding the detection by the sensors is that the objects in the environment are detected as a whole by the sensors as a whole. An indication of what a particular one of those sensors detects is not provided, except to the extent that it is indicated in paragraph 31, that a sensor will detect distance, angle, and relative velocity, while another, a camera, measures certain other parameters of objects. Aside from indicating the different kinds of data that the sensors provide, the “Stiller” reference does not indicate the particular object a particular sensor detects. The reference simply does not refer to detection of any particular object by any of the sensors. The reference certainly does not indicate that any particular object is detected by both of the sensors.

In the “Response to Arguments” section, the Examiner asserts that paragraph 31 and figure 1 of the “Stiller” reference disclose detection of a common calibration target by two or more sensors. However, the “Stiller” reference refers to objects in the plural form. For example, in the section cited by the Examiner, it refers to “objects 6.” The “Stiller” reference, paragraph 31. Stated otherwise, paragraph 31 of the “Stiller” reference merely indicates, for whichever objects a particular one of the sensors detect, the different aspects of the objects the different sensors detect. That is, for the respectively detected objects there are different kinds of data being detected. Paragraph 31 does not indicate that different parts of the same object are being detected by the different sensors. As explained above, the “Stiller” reference merely refers to the sensors as a whole detecting multiple objects as a whole, and does not discuss the relationships of individual ones of the sensors with individual ones of the objects. Therefore, it is not possible to conclude that the “Stiller” reference provides for detection of a single object by multiple sensors. Indeed, any review of the “Stiller” reference makes plain that it does not identically disclose, or even suggest, the feature of “calibrating at least two sensors . . . wherein the calibration includes using each of the at least two sensors to detect at least one part of a common calibration object,” as provided for in the context of claim 12. Accordingly, the “Stiller” reference does not identically disclose, or even suggest, each of the features of claim 12, so that the “Stiller” reference does not anticipate claim 12 or its dependent claims 13 to 17 and 24.

As further regards claim 14, which provides that the calibration includes “aligning the at least two sensors such that the calibration object is in a detection range of each of the at least two sensors,” the Office Action refers to paragraphs 21 and 22 as assertedly disclosing this feature. While the cited section of the “Stiller” reference may indicate that in a typical case objects will be in a detection range of the sensors, the “Stiller” reference does not indicate that a single object will be in the detection ranges of two or more of the sensors. Furthermore, even assuming for argument’s sake that the cited section discloses that a single object may be within the detection ranges of two or more sensors (which it does not), the “Stiller” reference does not disclose a step of aligning two or more sensors where the alignment is performed to cause the single object to be in the detection ranges of the two or more sensors. Indeed, any review of the “Stiller” reference makes plain that it does not identically disclose, or even suggest, aligning at least two sensors such that a calibration object is in a detection range of each of the at least two sensors, as provided for in the context of claim 14. Thus, the “Stiller” reference does not disclose, or even suggest, each feature of claim 14, so that the “Stiller” reference does not anticipate claim 14 or its dependent claims 15 to 17.

Claims 18 and 19 include subject matter similar to that discussed above as to claim 12, so that the “Stiller” reference does not anticipate either of claims 18 and 19 or its dependent claims, e.g., claims 20 and 21, for the same reasons as claim 12.

As further regards claim 24, which provides that different ones of at least two sensors detect different parts of a common calibration object, the Office Action refers to paragraph 31 of the “Stiller” reference as assertedly disclosing this feature. As an initial matter, as set forth above in support of the patentability of claim 12, the “Stiller” reference refers to objects in the plural form, and does not indicate that the same ones of the objects are detected by the different sensors. Furthermore, while paragraph 31 of the “Stiller” reference may indicate that different sensors obtain data regarding different aspects of whichever objects the sensors detect, the cited paragraph does not disclose that the different sensors detect different parts of the same object. Indeed, nowhere does the “Stiller” reference identically disclose, or even suggest, that different ones of at least two sensors detect different parts of a common calibration object. For this additional reason, the “Stiller” reference does not disclose, or even suggest, each of the features of claim 24, so that the “Stiller” reference does not anticipate claim 24.

Withdrawal of the anticipation rejection of claims 12 to 21 and 24 is therefore respectfully requested.

Claims 22 and 23 were rejected under 35 U.S.C. § 103(a) as unpatentable over the combination of the “Stiller” reference and U.S. Patent No. 6,363,619 (the “Schirmer et al.” reference).

To reject a claim under 35 U.S.C. § 103(a), the Office bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim features. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

Claims 22 and 23 ultimately depend from claim 19, and are therefore allowable for the same reasons as claim 19, since the secondary “Schirmer” reference does not cure the critical deficiencies of the “Stiller” reference as to claim 19, as presented.

Furthermore, the Office Action asserts that “[i]t would have been obvious to modify Stiller to use a triple mirror with calibration marks as taught by Schirmer as a reference feature in order to reflect radar waves in the same direction as they came, and the calibration marks to help align the system correctly, therefore increasing the effectiveness of the calibration system.” Office Action, page 4. However, prior art references must be considered as a whole, including portions that teach away from the claimed subject matter. *W.L. Gore, supra*.

Furthermore, *prima facie* obviousness cannot be established based on a modification of a reference that destroys the intent, purpose, or function of the invention disclosed in the reference, since there is no suggestion or motivation to make the proposed modification. *See In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984). As set forth in Applicants’ Response, dated April 17, 2007, the “Stiller” reference is directed to “guarantee[ing] permanent functional reliability [by] subsequent repeated checking of the

calibration for possible changes" after calibration "is done in a laboratory-like environment." The "Stiller" reference, paragraph 3.

For this purpose, the "Stiller" reference provides for performing calibration using undetermined objects that happen to appear within the environment in front of the vehicle so that "no other equipment is necessary except for the essentially known sensor elements in the vehicle environment and an analyzer unit or calibration unit." The "Stiller" reference, paragraph 6. Thus, the "Stiller" reference specifically teaches away from using predetermined calibration objects having particular features based on which to perform the calibration performed by the system of the "Stiller" reference. Indeed, such a calibration destroys the intent, purpose, and function of the "Stiller" reference.

In the "Response to Arguments" section, the Examiner apparently agrees that even the system of the "Stiller" reference as modified to include the features of the "Schirmer" reference, would provide for use of a triple mirror only for calibration in a laboratory environment and not for subsequent calibration. However, it is the subsequent calibration discussed in the "Stiller" reference, not a laboratory environment calibration, to which the Office Action refers as assertedly disclosing the feature of "a first reference feature adapted to be detected by at least two sensors for calibration of the at least two sensors." Even assuming for argument's sake that the "Stiller" reference does disclose detection of a single reference feature by two or more sensors (which it does not as explained above), none of the cited references suggest use of these features of the "Stiller" reference in a laboratory environment calibration procedure. In this regard, it is noted that the "Stiller" reference indicates that its calibration method may be used for performing an initial calibration and subsequent calibrations. See the "Stiller" reference, paragraph 6. Further, its calibration method is one that is specifically designed so that no particular calibration object need be used, but rather *any surrounding environment* may be used. Accordingly, even if the calibration method of the "Stiller" reference is used as the initial calibration method, one skilled in the art would not use the method in a laboratory environment.

Further, since the method of the "Stiller" reference is specifically designed such that any surrounding environment can be used, the method of the "Stiller" reference has no use for the triple mirror of the "Schirmer" reference. Accordingly, even if the method of the "Stiller" reference would be performed in a laboratory environment, one skilled in the art would not modify the method to use the triple mirror of the "Schirmer" reference, since there

is simply nothing in the prior art references that would suggest to one skilled in the art to use the triple mirror when performing the method of the "Stiller" reference.

Therefore, one skilled in the art would not modify the "Stiller" reference to provide for a method that includes both the features of the "Stiller" reference and that of the "Schirmer" reference. At most, a combination of the references would provide for use of two separate calibration methods, one having the features of the "Schirmer" reference when performing an initial calibration and one having the features of the "Stiller" reference when performing subsequent calibrations. Accordingly, the "Stiller" reference modified as suggested by the Examiner, does not disclose or suggest a reference feature which includes at least one triple mirror and which is adapted to be detected by at least two sensors, as provided for in the context of claim 22.

For this additional reason, the combination of the "Stiller" and "Schirmer" references does not disclose or suggest each feature of claim 22, so that claim 22 and its dependent claim 23 are allowable for this additional reason.

Withdrawal of the obviousness rejection of claims 22 and 23 is therefore respectfully requested.

Accordingly, all of pending claims 12 to 24 are allowable.

Conclusion

In view of the foregoing, it is respectfully submitted that all of claims 12 to 24 are allowable. It is therefore respectfully requested that the objections and rejections be withdrawn. Prompt reconsideration and allowance of the present application are therefore respectfully requested.

Respectfully submitted,

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